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FIG. 1

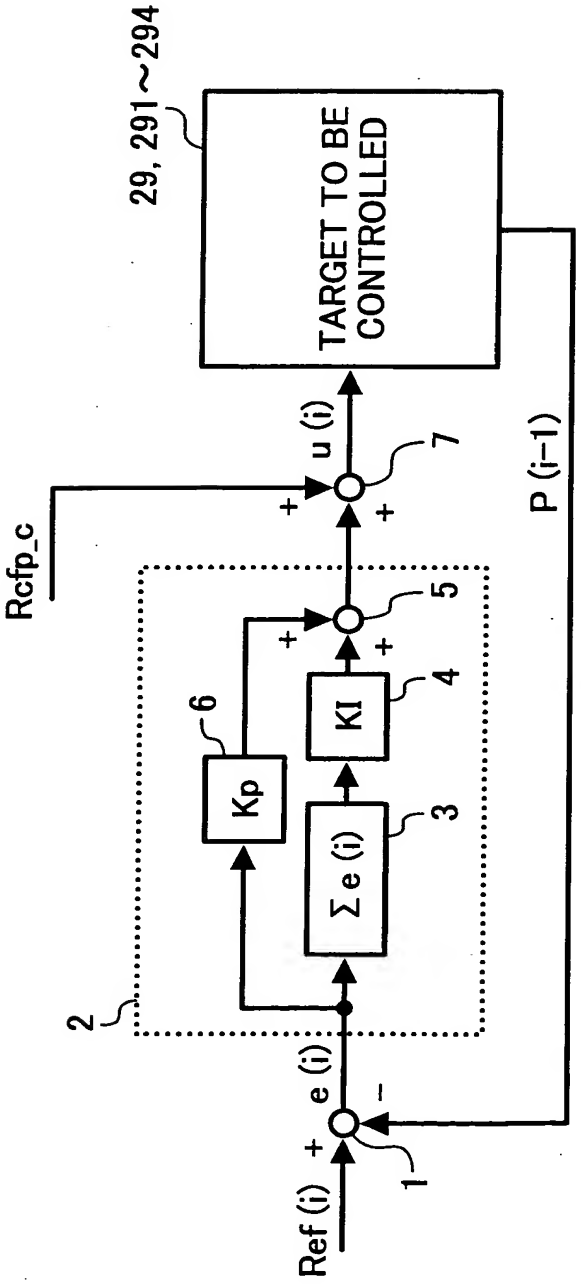


FIG. 2

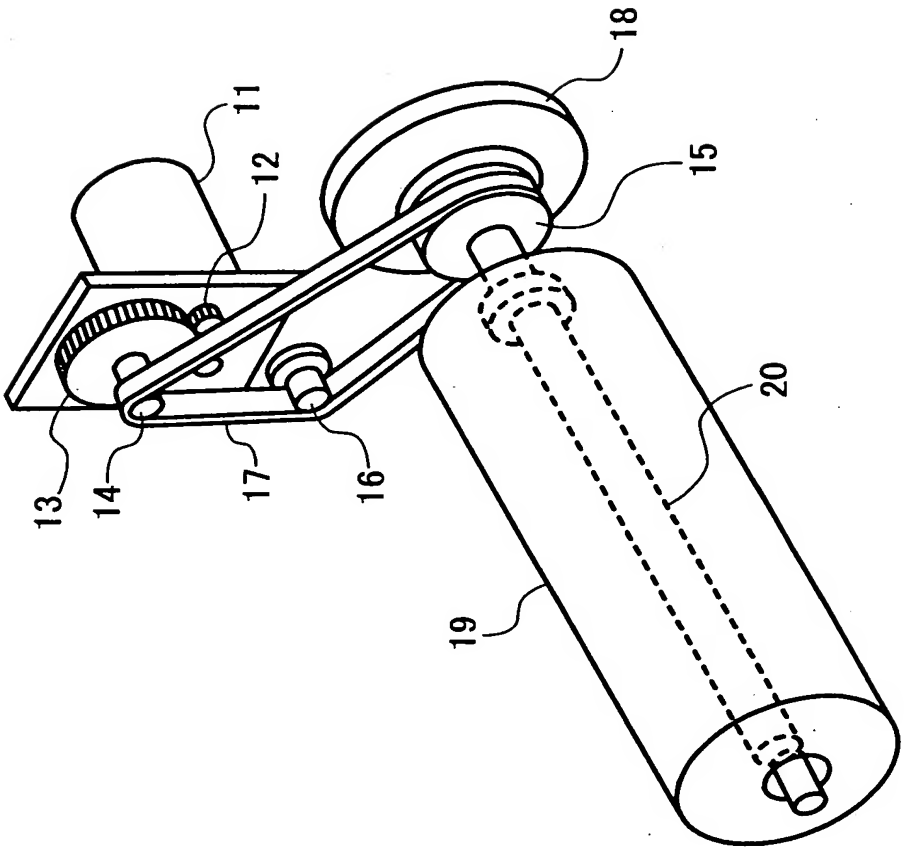


FIG. 3

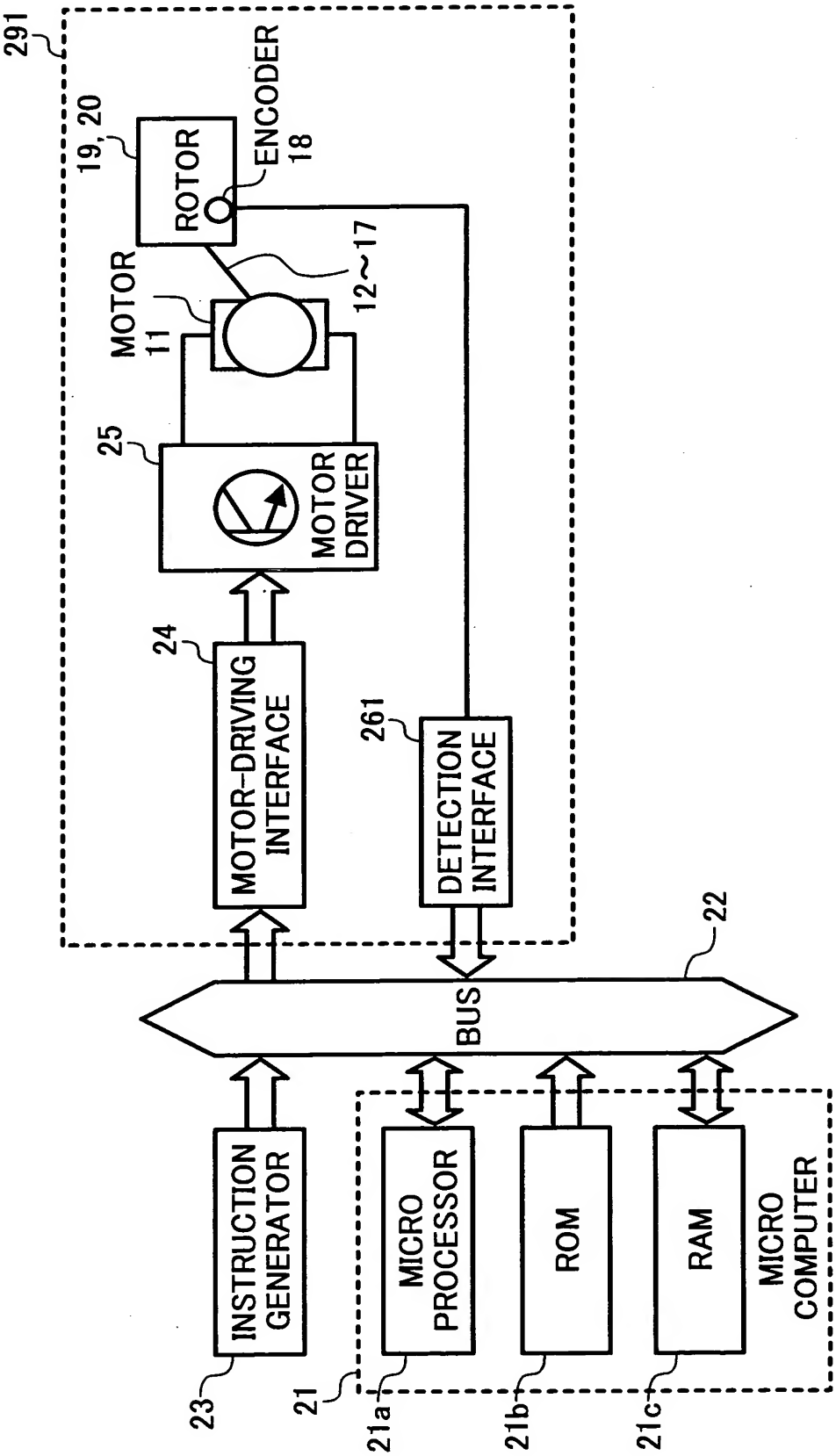

291
19, 20
ROTOR
ENCODER
18
MOTOR
11
12~17
25
MOTOR DRIVER
24
MOTOR-DRIVING INTERFACE
261
DETECTION INTERFACE
22
BUS
INSTRUCTION GENERATOR
MICRO PROCESSOR
ROM
RAM
MICRO COMPUTER
23
21
21a
21b
21c

FIG. 4

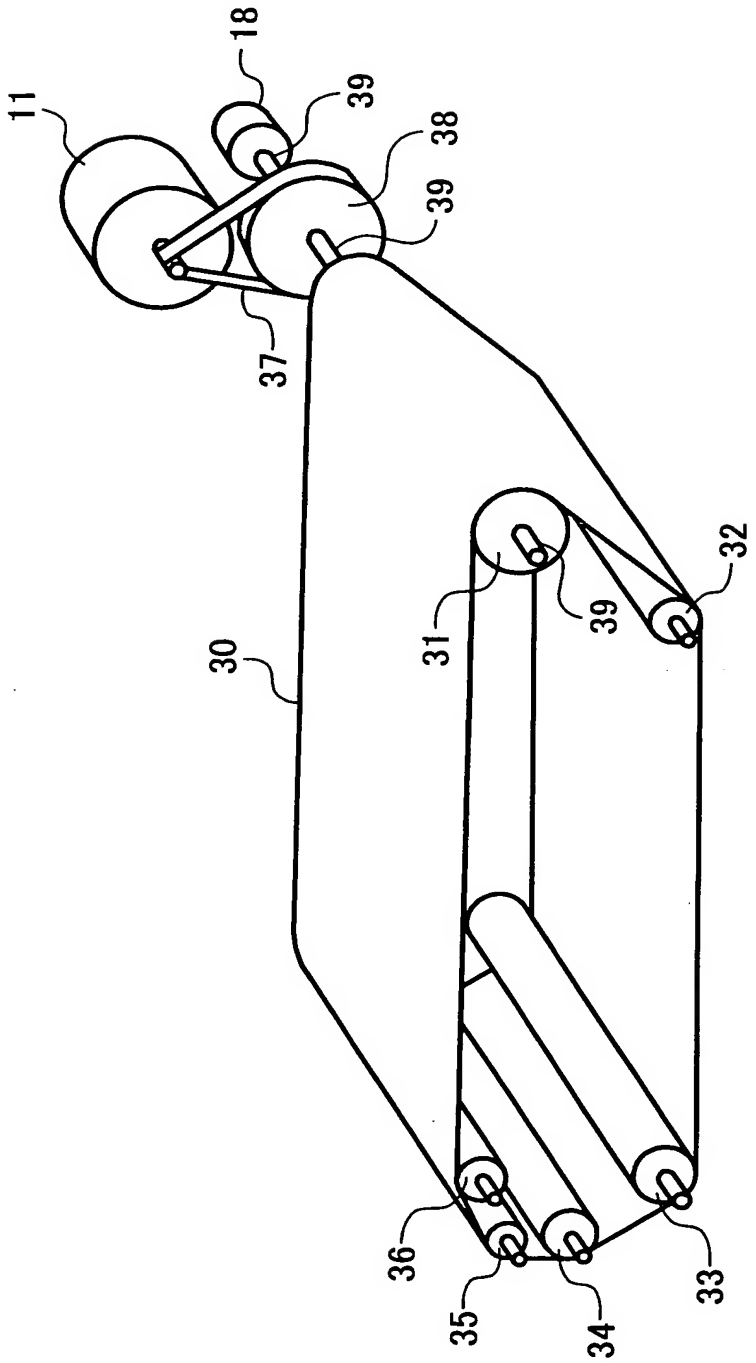


FIG. 5

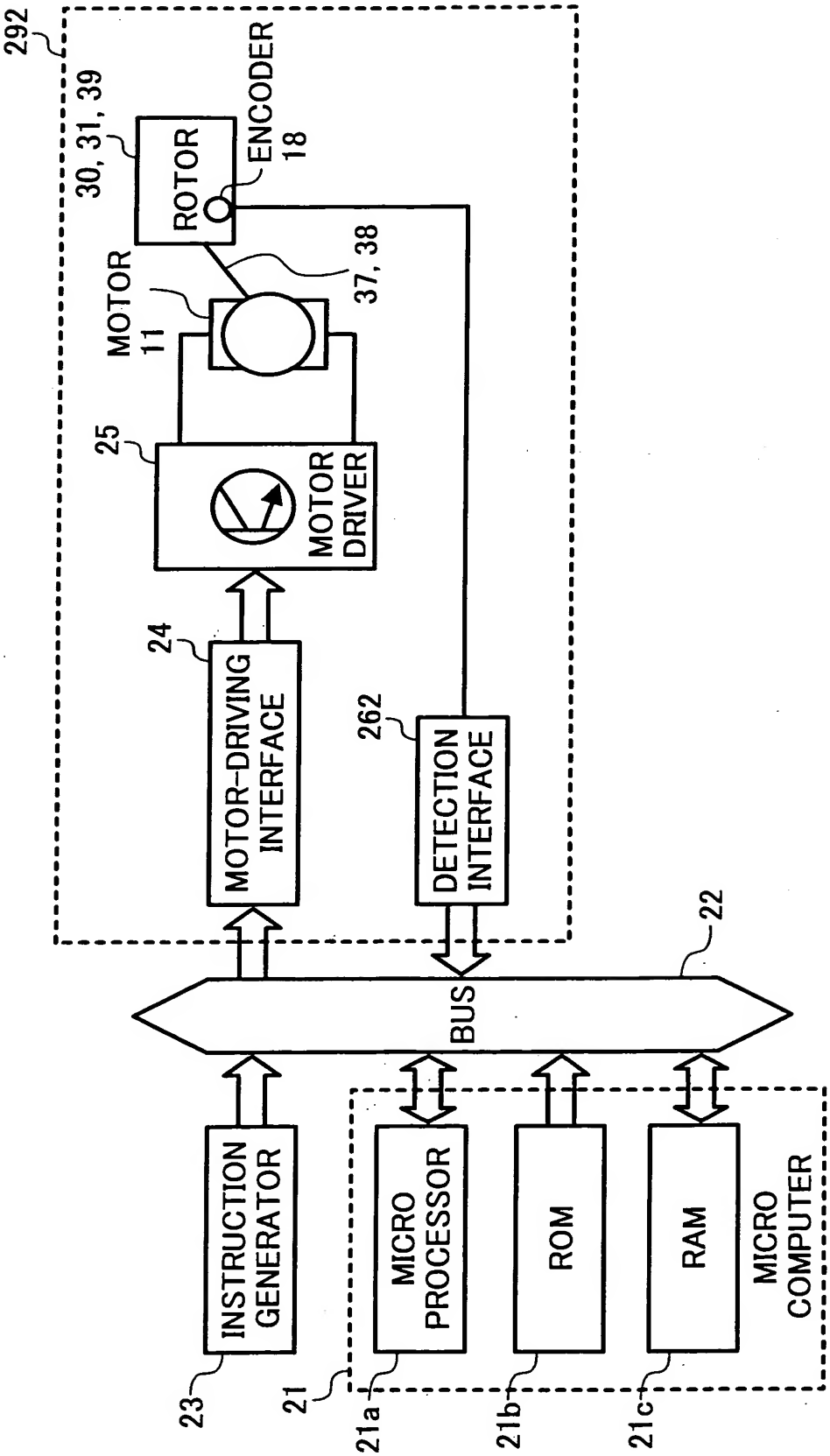

292
30, 31, 39
ROTOR
ENCODER
18
MOTOR
11
37, 38
25
MOTOR DRIVER
24
MOTOR-DRIVING INTERFACE
262
DETECTION INTERFACE
22
BUS
INSTRUCTION GENERATOR
MICRO PROCESSOR
ROM
RAM
MICRO COMPUTER
23
21
21a
21b
21c

FIG. 6

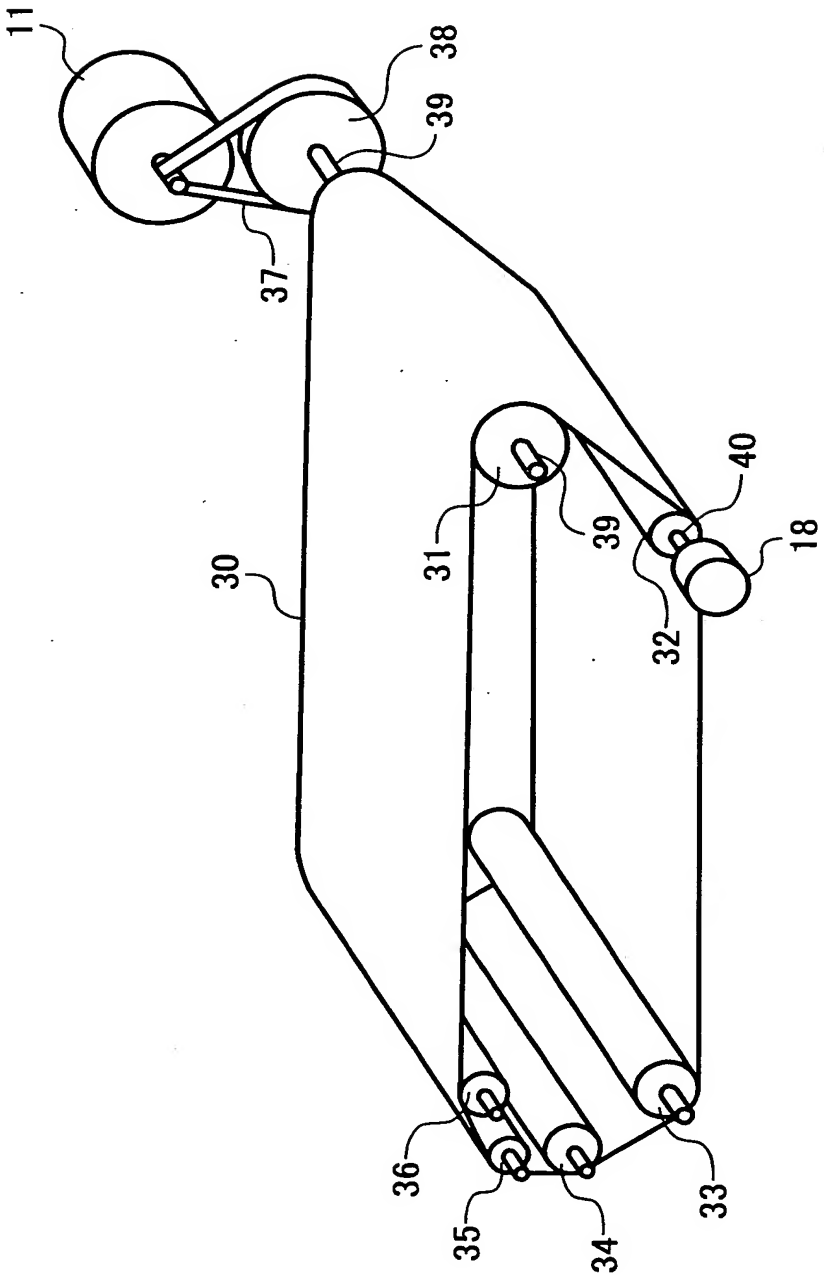


FIG. 7

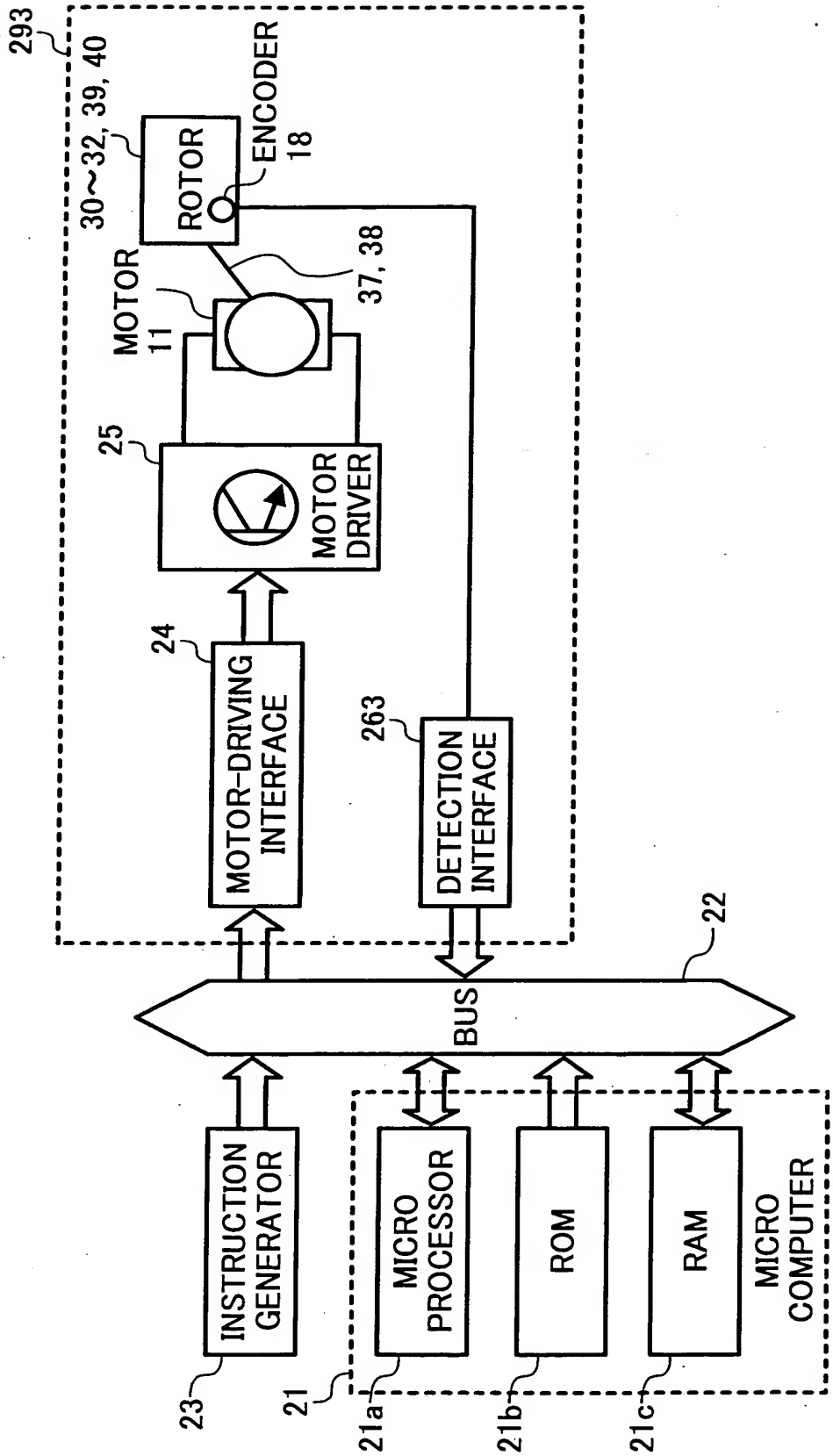

293
30~32, 39, 40
ROTOR
ENCODER
18
MOTOR
11
37, 38
25
MOTOR DRIVER
24
MOTOR-DRIVING INTERFACE
263
DETECTION INTERFACE
22
BUS
INSTRUCTION GENERATOR
MICRO PROCESSOR
ROM
RAM
MICRO COMPUTER
23
21
21a
21b
21c

FIG. 8

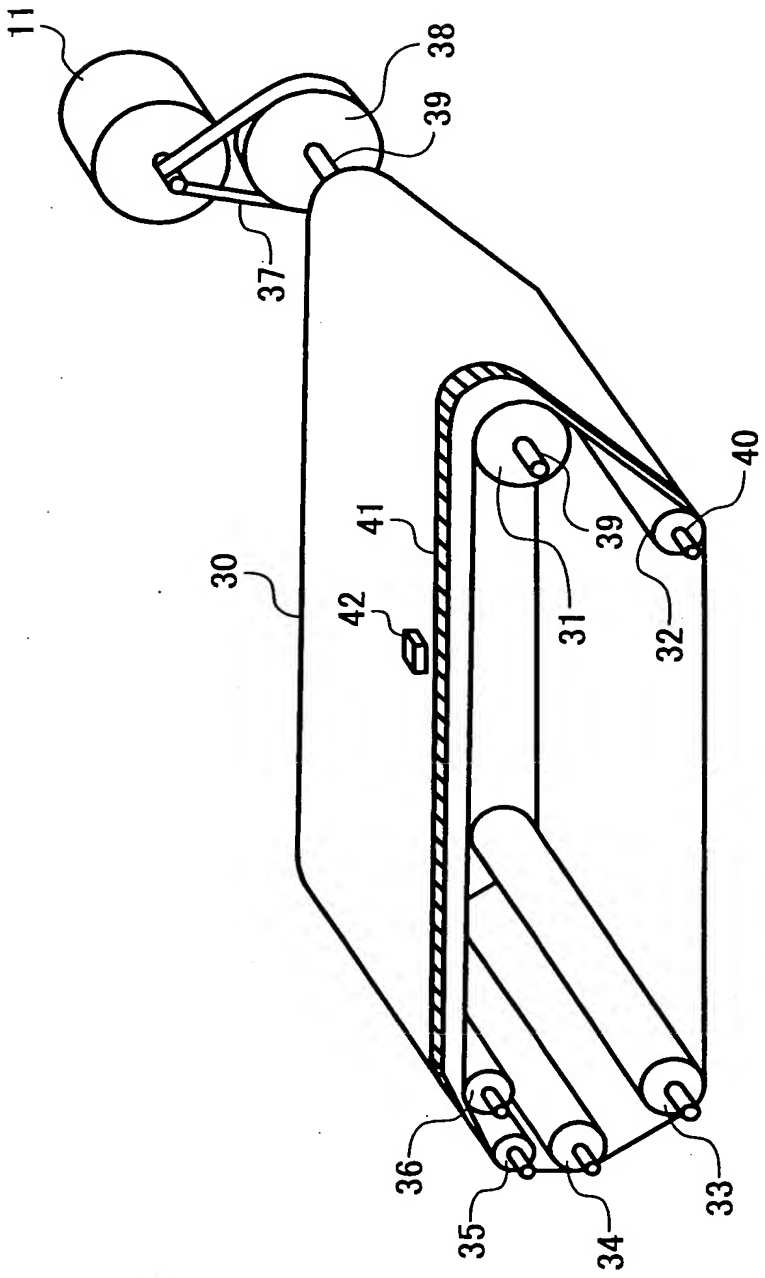


FIG. 9

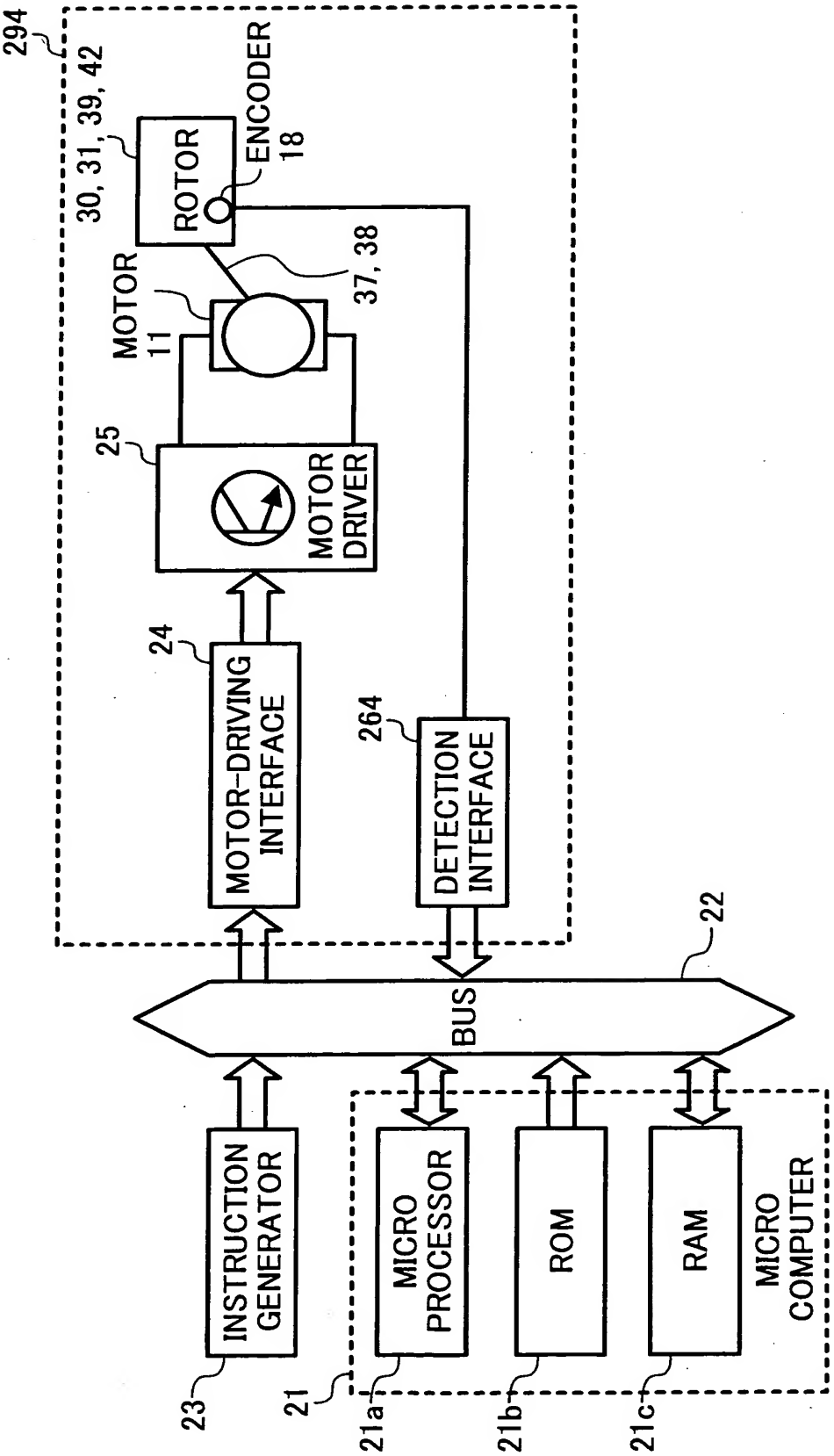

294
30, 31, 39, 42
ROTOR
ENCODER
18
MOTOR
11
37, 38
25
MOTOR DRIVER
24
MOTOR-DRIVING INTERFACE
264
DETECTION INTERFACE
22
BUS
INSTRUCTION GENERATOR
MICRO PROCESSOR
ROM
RAM
MICRO COMPUTER
23
21
21a
21b
21c

FIG. 10

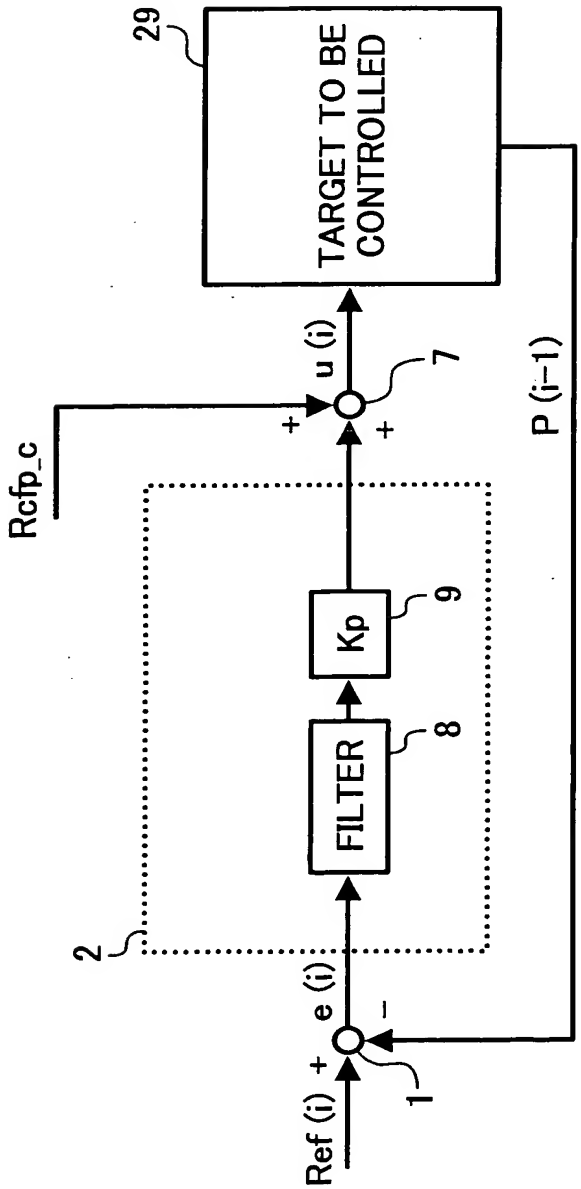
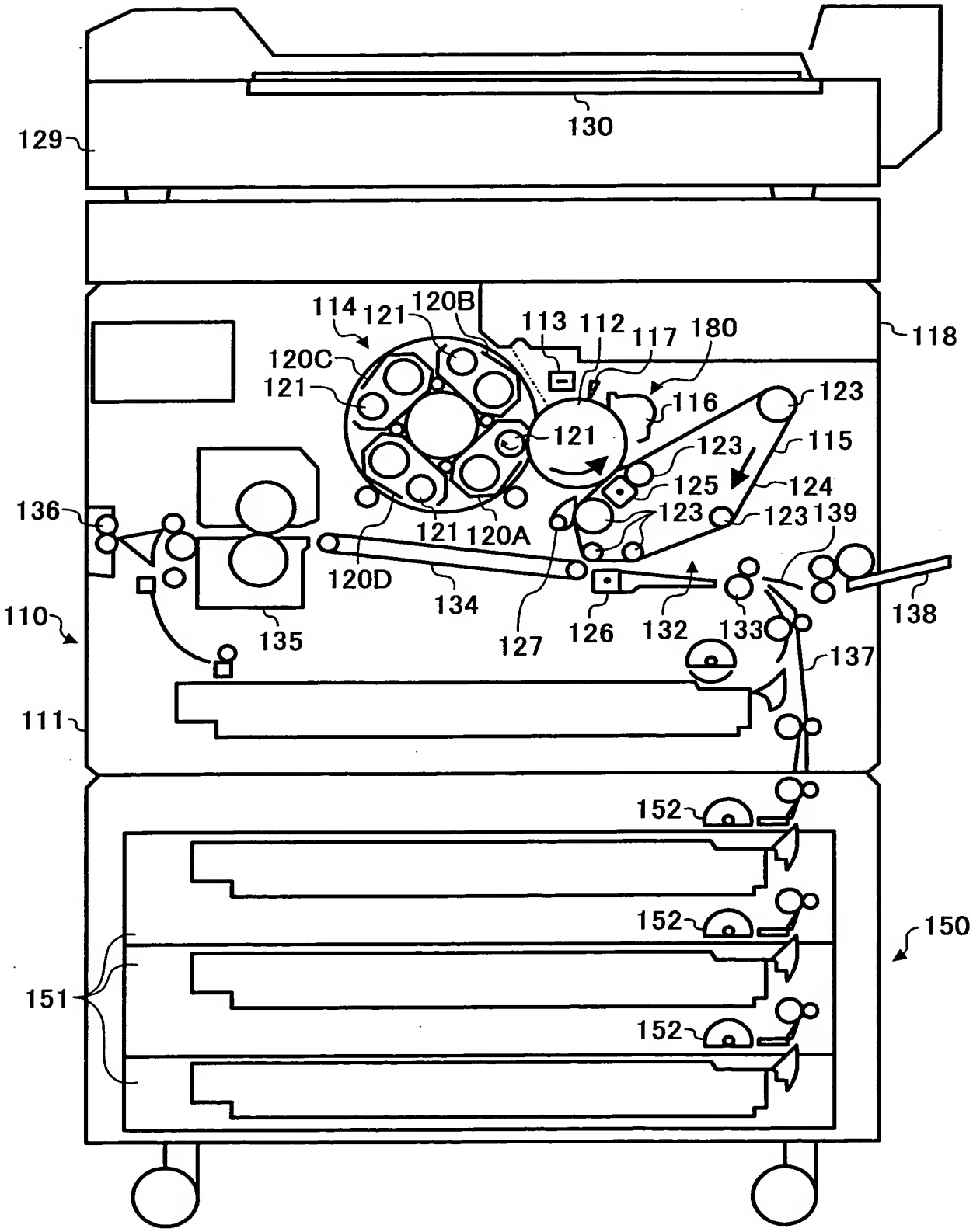

29
TARGET TO BE CONTROLLED
u (i)
7
+
+
Rcfp_c
P (i-1)
Kp
9
FILTER
8
2
e (i)
+
-
Ref (i)
1

FIG. 11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120B
113
112
117
180
118
120C
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123
139
121
120A
120D
134
127
126
132
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138
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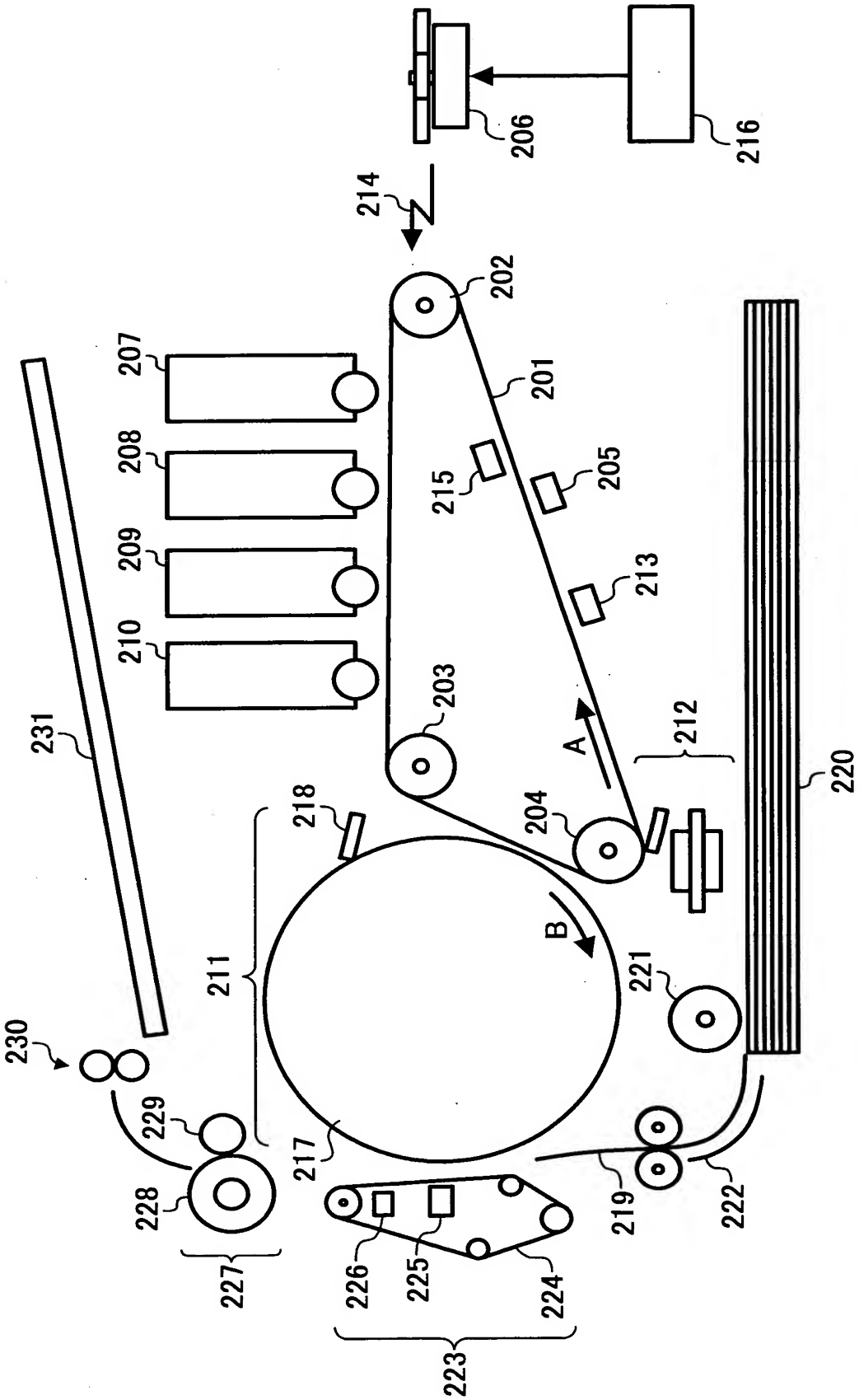
135
137
111
152
152
150
151
152

FIG. 12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203
231
212
A
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204
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B
211
221
230
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224
223

FIG. 13

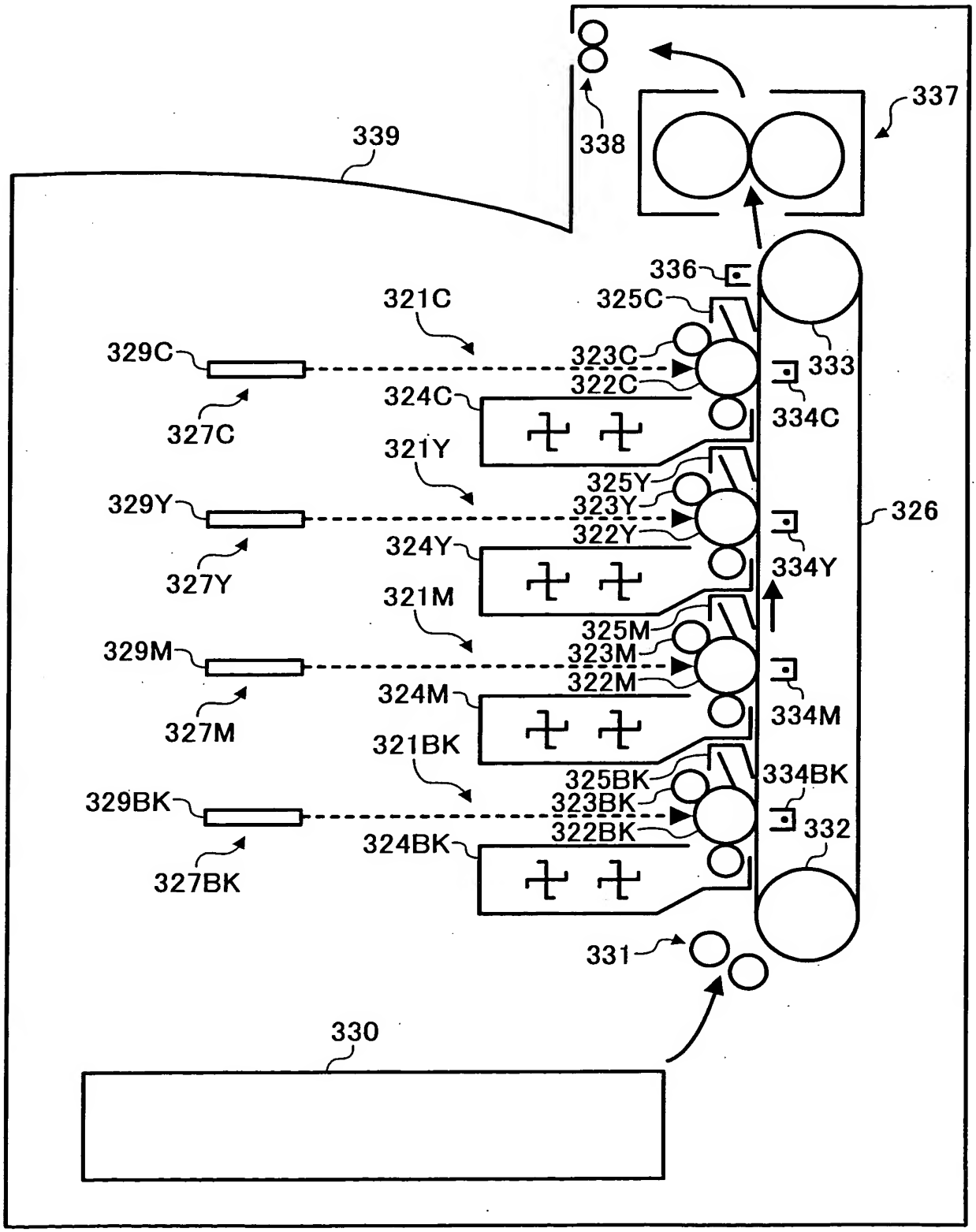

339
338
337
336
321C
325C
329C
323C
322C
333
324C
334C
327C
321Y
325Y
329Y
323Y
326
322Y
324Y
334Y
327Y
321M
325M
329M
323M
322M
324M
334M
327M
321BK
325BK
334BK
329BK
323BK
322BK
332
324BK
327BK
331
330

FIG. 14

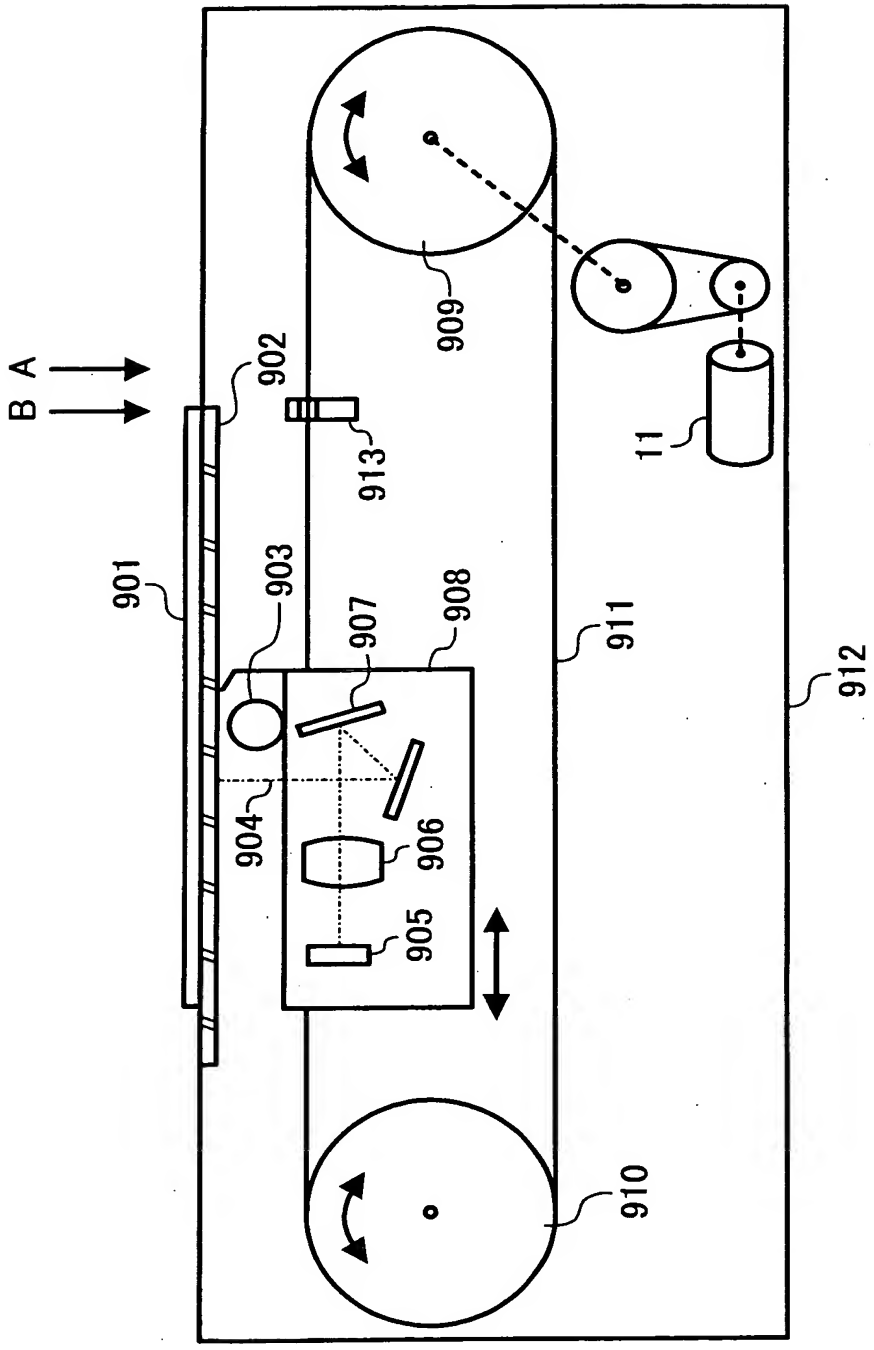


FIG. 15

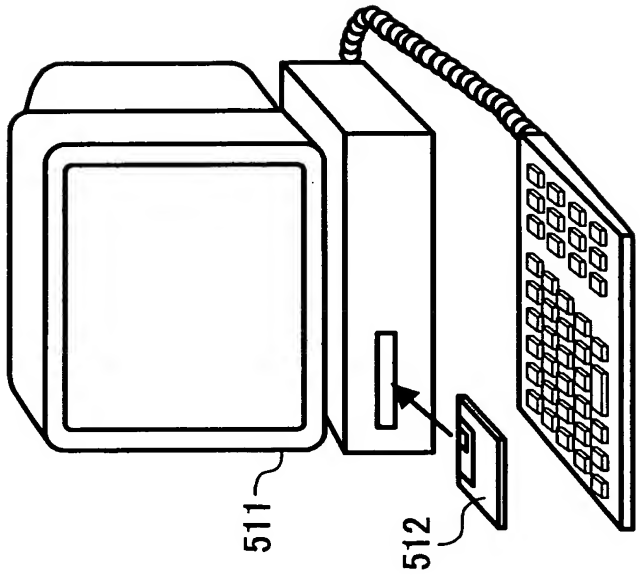


FIG. 16

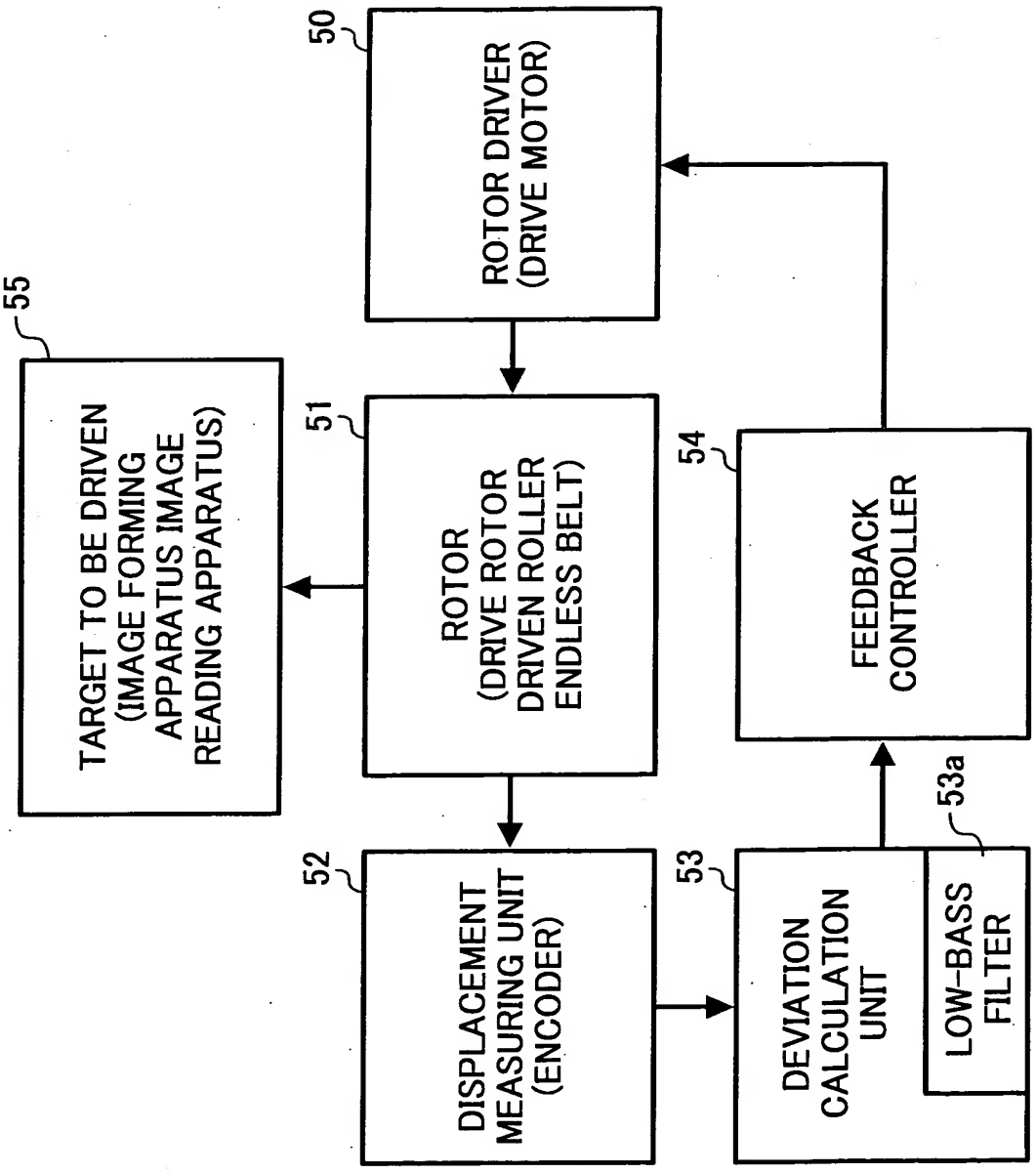

50
ROTOR DRIVER (DRIVE MOTOR)
55
TARGET TO BE DRIVEN (IMAGE FORMING APPARATUS IMAGE READING APPARATUS)
51
ROTOR (DRIVE ROTOR DRIVEN ROLLER ENDLESS BELT)
54
FEEDBACK CONTROLLER
52
DISPLACEMENT MEASURING UNIT (ENCODER)
53
DEVIATION CALCULATION UNIT
53a
LOW-BASS FILTER

FIG. 17

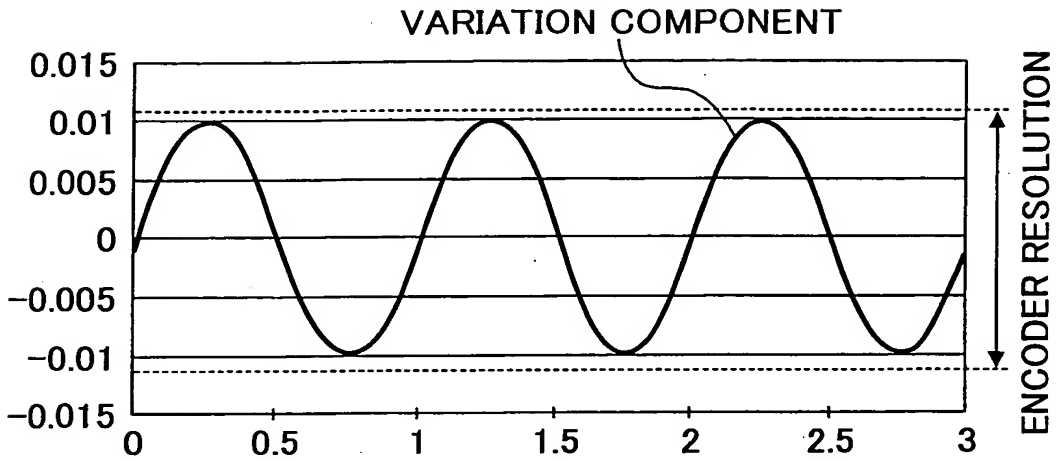


FIG. 18

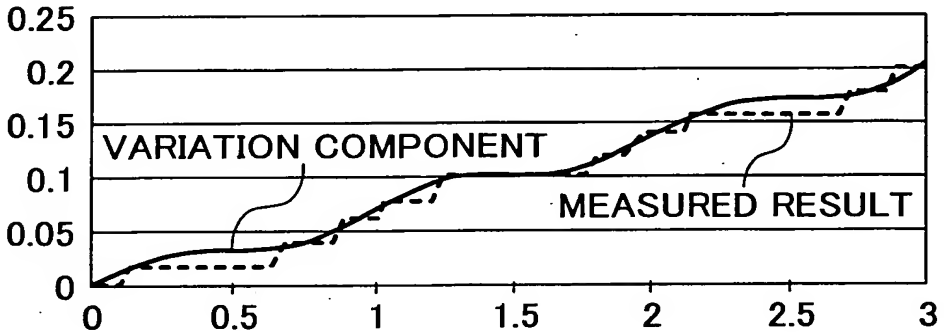


FIG. 19

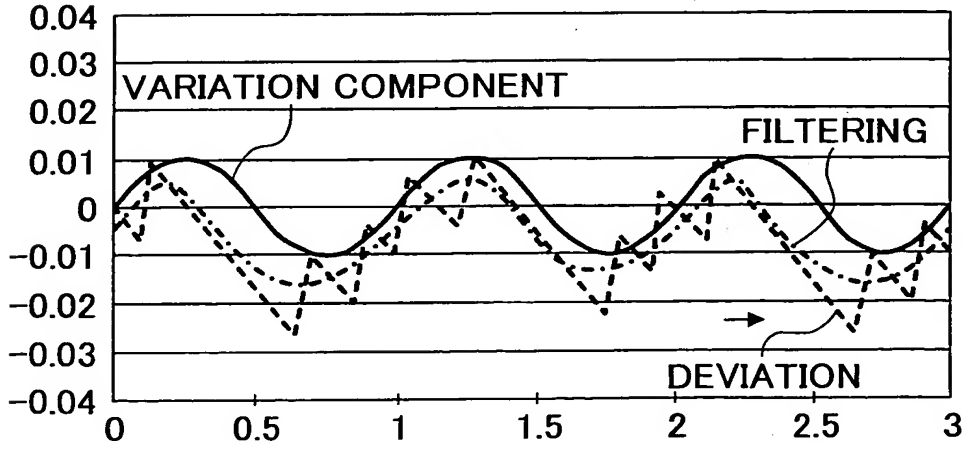


FIG. 20

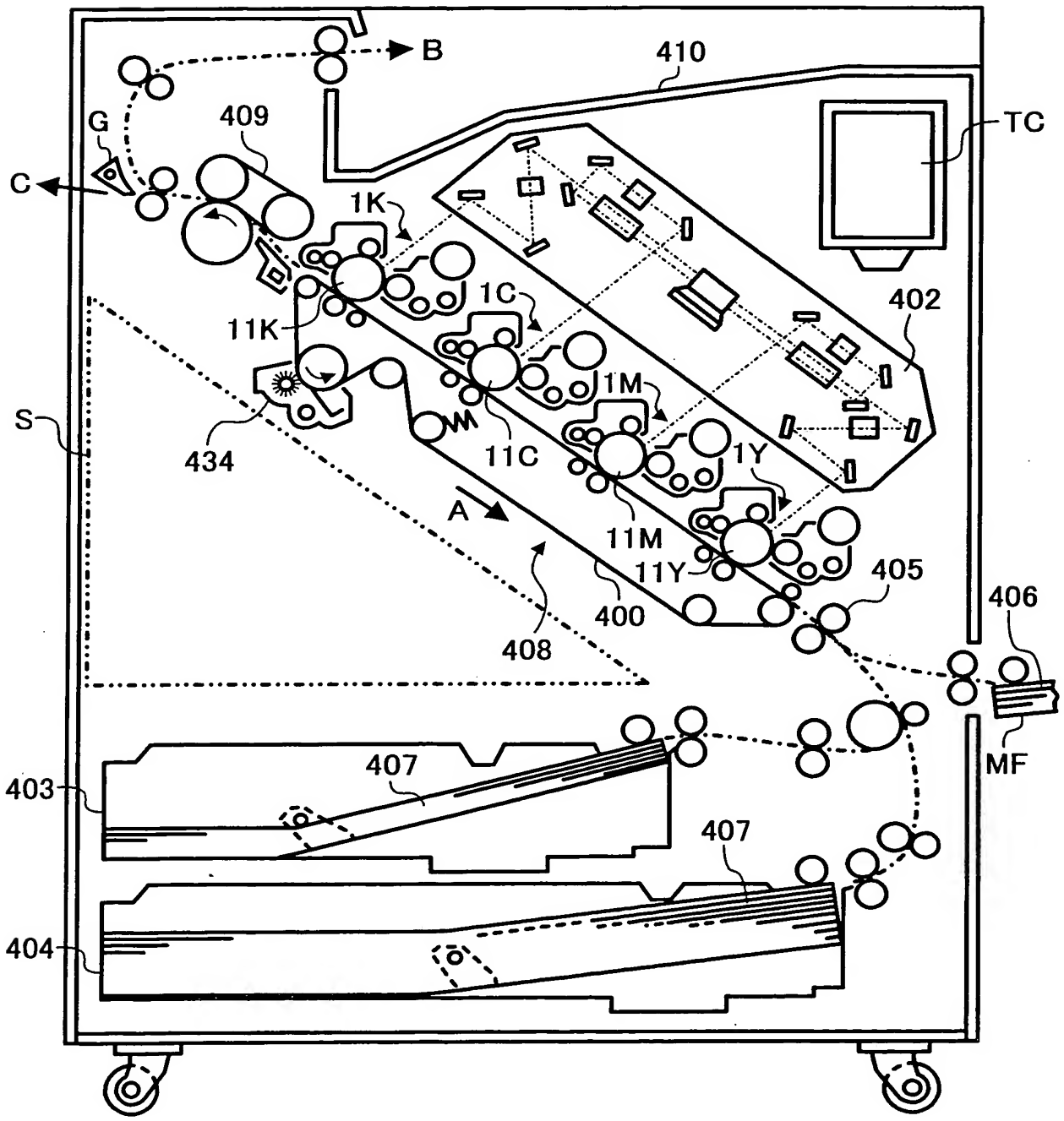
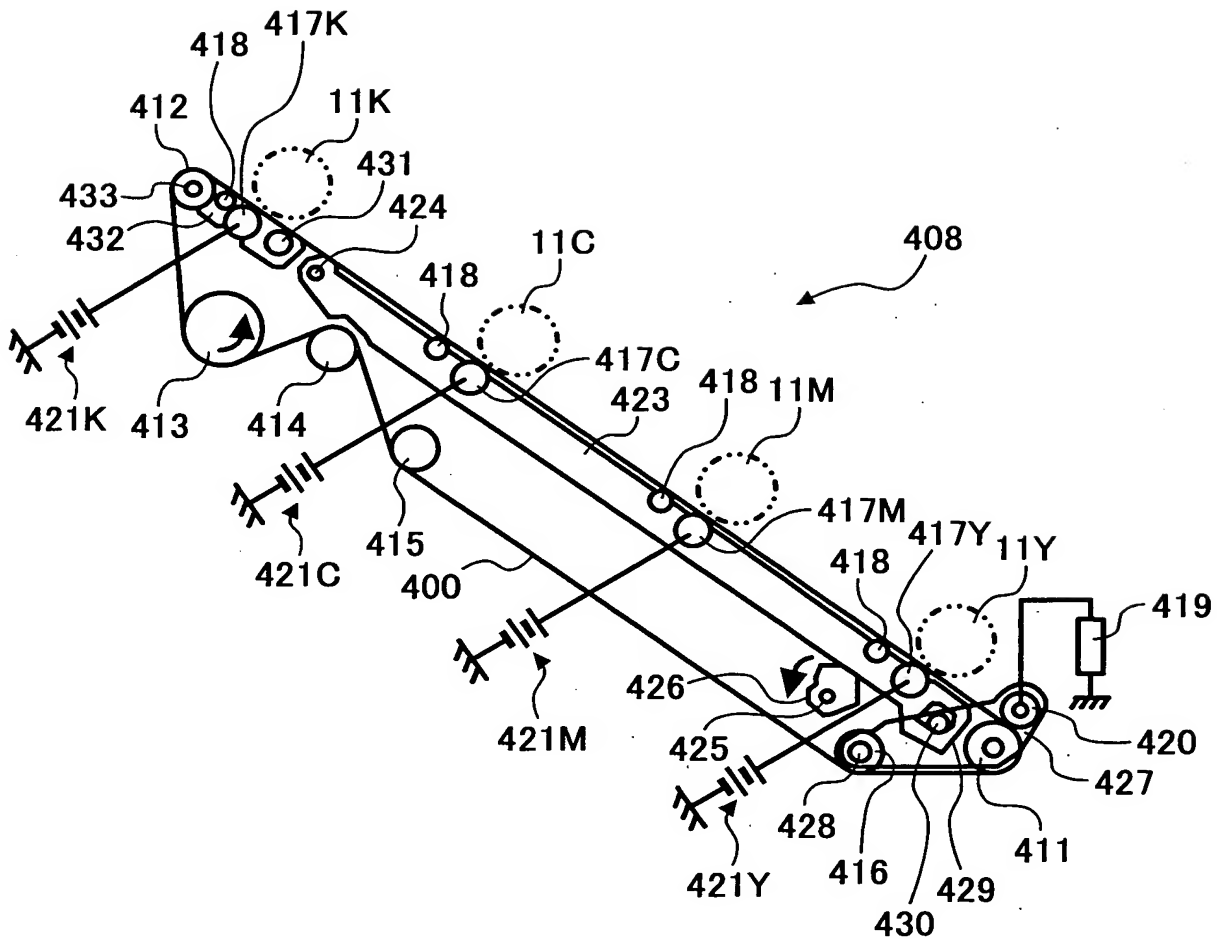

B
410
G
409
TC
C
1K
1C
402
11K
1M
S
434
11C
1Y
A
11M
11Y
405
406
400
408
MF
403
407
407
404

FIG. 21


417K
418
412
11K
431
433
424
432
11C
408
418
417C
421K
413
414
423
418
11M
417M
417Y
11Y
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421C
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421M
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420
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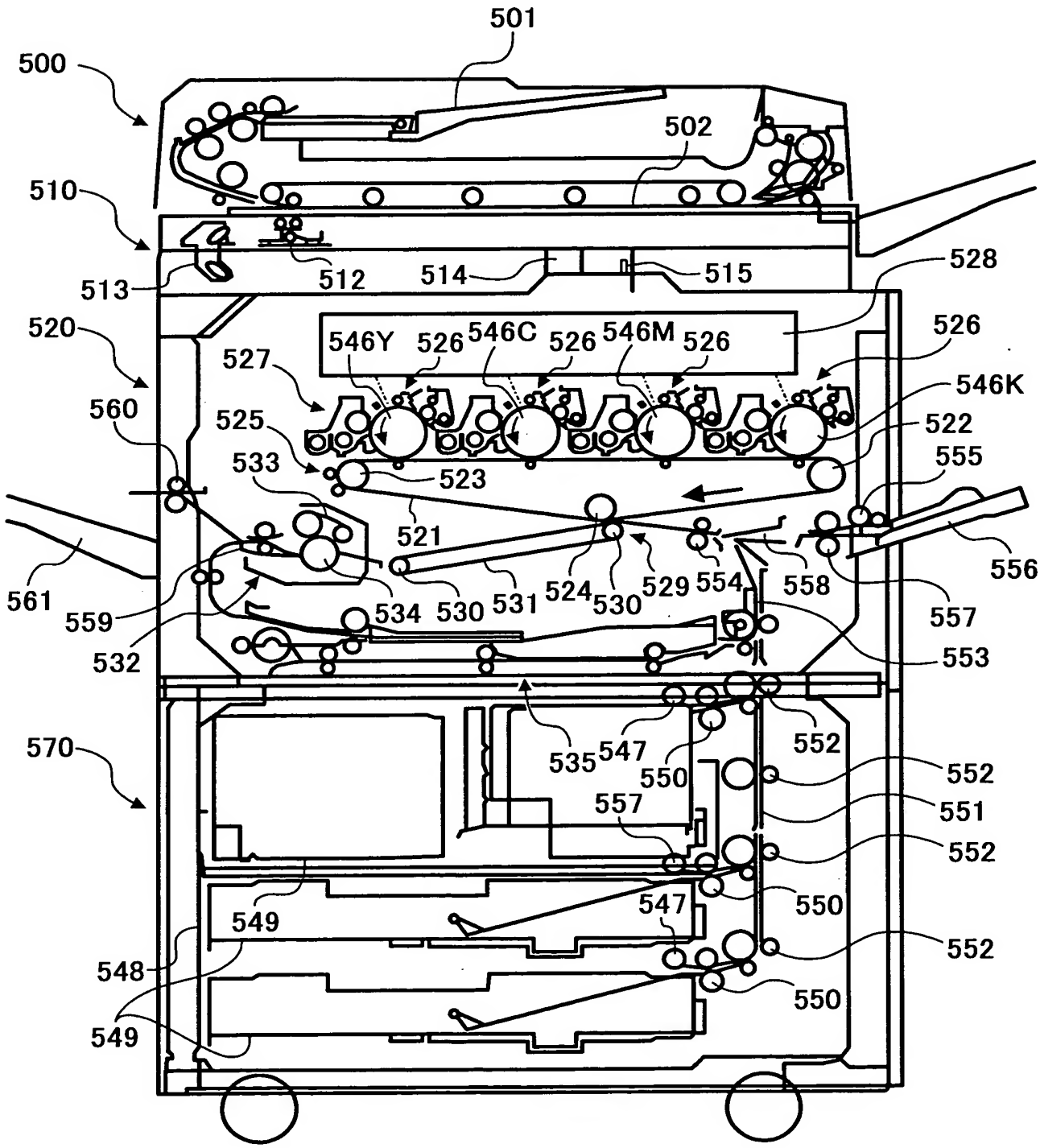
428
411
421Y
416
429
430

FIG. 22


501
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502
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512
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546Y
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546C
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546M
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546K
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